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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/134,405	08/14/1998	YONG SUNG HAM	8733D-6833	7940

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EXAMINER

DUONG, TAI V

ART UNIT PAPER NUMBER

2871

DATE MAILED: 02/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.
09/134,405

Applicant(s)
HAM

Examiner
TAI DUONG

Art Unit
2871



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Nov 21, 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

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The declaration of Yong Sung Ham under 37 CFR 1.132 filed 11/21/01 is insufficient to overcome the rejection of claims 1-28 based upon Applicant's Prior Art Figs. 1A-B, Ohe et al., Kang et al. and Yanagawa et al. as set forth in the last Office action because:

The evidence or showing (paragraphs 6 and 7 of the declaration) is not commensurate in scope of the claims. Original claims 1 and 12 recited the claimed in-plane (IP) switching mode liquid crystal display (LCD) device wherein $d_{\Delta n}$ is in the range of 0.29 - 0.36 μm . Original claims 1 and 12 were anticipated by Ohe et al because Ohe discloses an IP switching mode LCD device wherein $d_{\Delta n}$ is about 0.30 μm (see page 2 of the Office action dated 3/30/00, Paper No. 12). Applicant amended claims 1 and 12 by adding the feature "the common line and the data bus lines having *a crossing relationship*". Applicant argued that Ohe et al. do not disclose the "combination of features including the common line and the data bus lines having a crossing relationship and $d_{\Delta n}$ in the range of 0.29-0.36 μm " (page 6 of the amendment dated 9/12/00, Paper No. 15). Amended claims 1 and 12 are rejected in view of the combination of Applicant's Prior Art Figs. 1A-B and Ohe et al because Prior Art Figs. 1A-B disclose that it was known to employ the common line and the data bus lines having a crossing relationship (see the below 103 rejection of claims 1 and 12). Nowhere in the declaration does it address the feature "the common line and the data bus lines having a crossing relationship" and the unexpected results associated with this feature.

In addition, the declaration does not compare the claimed subject matter with the closest prior art, Ohe et al.. Ohe et al also disclose the same benefits of using $d_{\Delta n}$ being about 0.30 μm

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in order to attain a higher transmission index and a whiteness (no color-shift) of the display emission light for the display pixel (col. 6, lines 50-55). Nowhere in the declaration does it state (compare) that Ohe's IP-LCD device with $d_{\Delta n}$ of $0.30\text{ }\mu\text{m}$ cannot increase the light transmittance and cannot prevent color-shift.

In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.

Claims 1-3, 5, 8, 9, 12-14, 16, 19, 20 and 23- 27 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Figs. 1A-B in view of Ohe et al.'271 .

Applicant's Prior Art Figs. 1A-B disclose a LCD and a method of making of the LCD similar to those of the instant claims except for the $d_{\Delta n}$ being in the range of $0.29\text{-}0.36\text{ }\mu\text{m}$ (specification, pages 2-5). However, Ohe et al disclose that it was known to employ $d_{\Delta n}$ having a value of $0.30\text{ }\mu\text{m}$ for attaining a higher transmission index and a whiteness of the display emission light (col. 6, lines 50-55). Thus, it would have been obvious to a person of ordinary skill in the art to employ $d_{\Delta n}$ having a value of $0.30\text{ }\mu\text{m}$ (which is within in the recited range $0.29\text{-}0.36\text{ }\mu\text{m}$) in Applicant's Prior Art Figs. 1A-B for attaining a higher transmission index and a whiteness of the display emission light , as disclosed by Ohe et al.

Claims 4, 6, 7, 10, 11, 15, 17, 18, 21 and 22 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Figs. 1A-B and Ohe et al.'271 as applied to claims

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1-3, 5, 8, 9, 12-14, 16, 19, 20 and 23-28 above, and further in view of Yanagawa et al.'160 and Kang et al.'669 of record.

These claims recite that the passivation layer includes one of SiNx and SiOx, and one of the alignment layers comprises a photosensitive material being selected from the group consisting of polyvinylcinnamate, polysiloxane cinnamate and cellulosecinnamate. However, these materials are well-known in the art for the same intended purposes as those of the instant claims, as evidenced by Yanagawa et al. (PSV in Fig. 15 H) and Kang et al. (cols. 1 and 2).

Applicant's arguments filed 11/21/01 have been fully considered but they are not persuasive.

In response to applicant's arguments that Ohe et al does not show such a specific structure (the common line and the data bus line having a crossing relationship) of the claimed invention, if the Ohe et al reference discloses the common line and the data bus lines having a crossing relationship, the Ohe reference would be a 102(e) prior art. With respect to Applicant's remarks that the combination (of Ohe et al) with APAF is not based on proper motivating factors, it is unclear which motivating factors would be considered as proper or improper. As to Applicant's remarks that such combination is at best an obvious to try, which is not sufficient to combine references, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.

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See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In the instant case, both the APAF and Ohe et al are directed to an IP- LCD ; Ohe et al suggest to employ d. An of 0.30 μ m for solving the same problem as that of the instant invention. See the above remarks with respect to the declaration.


THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to Tai Duong at telephone number (703) 308-4873.

TD
TVD

2/8/02


William L. Sikes
Supervisory Patent Examiner
Technology Center 2800